IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	Group Art Unit: To Be Assigned
Leonard Presta	Examiner: To Be Assigned
Serial No.: To Be Assigned	
Filed: November 15, 2000	**CERTIFICATE OF MAILING** I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on
For: POLYPEPTIDE VARIANTS WITH ALTERED EFFECTOR FUNCTION	November 15, 2000 _Ann Savelli_ Ann Savelli

CERTIFICATE RE: SEQUENCE LISTING

BOX SEQUENCE
Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

I hereby state that the Sequence Listing submitted herewith is submitted in paper copy and a computer-readable diskette, and that the information recorded in computer readable form is identical to the written sequence listing. I further state that this submission includes no new matter.

Respectfully submitted,

GENENTECH, INC.

Date: November 15, 2000   By: _____
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<110> Leonard Presta

<120> Polypeptide Variants with Altered Effector Function

<130> P1720R1PCT

<141> 2000-11-15

<150> US 09/483,588
<151> 2000-01-14

<150> US 60/116,023
<151> 1999-01-15

<160> 11

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<213> Artificial Sequence

<220>
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<400> 1

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Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
 1               5                  10                  15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Lys Pro Val Asp
                20                  25                  30

Gly Glu Gly Asp Ser Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly
                35                  40                  45

Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Tyr Leu Glu Ser
                50                  55                  60

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
                65                  70                  75

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr
                80                  85                  90

Tyr Cys Gln Gln Ser His Glu Asp Pro Tyr Thr Phe Gly Gln Gly
                95                  100                 105

Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe
                110                 115                 120

Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser
                125                 130                 135

Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val
                140                 145                 150
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Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
                155   160   165

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                170   175   180

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
                185   190   195

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
                200   205   210

Lys Ser Phe Asn Arg Gly Glu Cys
                215

<210> 2
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<213> Artificial Sequence

<220>
<223> Sequence is completely synthesized

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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
  1   5   10   15

Gly Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Tyr Ser Ile Thr
                20   25   30

Ser Gly Tyr Ser Trp Asn Trp Ile Arg Gln Ala Pro Gly Lys Gly
                35   40   45

Leu Glu Trp Val Ala Ser Ile Lys Tyr Ser Gly Glu Thr Lys Tyr
                50   55   60

Asn Pro Ser Val Lys Gly Arg Ile Thr Ile Ser Arg Asp Asp Ser
                65   70   75

Lys Asn Thr Phe Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
                80   85   90

Thr Ala Val Tyr Tyr Cys Ala Arg Gly Ser His Tyr Phe Gly His
                95   100   105

Trp His Phe Ala Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser
                110   115   120

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
                125   130   135

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
                140   145   150

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
                155   160   165

2

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                170   175   180

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
                185   190   195

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
                200   205   210

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
                215   220   225

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
                230   235   240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
                245   250   255

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
                260   265   270

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
                275   280   285

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
                290   295   300

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
                305   310   315

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
                320   325   330

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
                335   340   345

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
                350   355   360

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
                365   370   375

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
                380   385   390

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
                395   400   405

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                410   415   420

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
                425   430   435

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
                440   445   450

Lys

<210> 3
<211> 218
<212> PRT
<213> homo sapiens

<400> 3

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Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
1               5                   10                  15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
                20                  25                  30

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
                35                  40                  45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                50                  55                  60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
                65                  70                  75

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
                80                  85                  90

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
                95                  100                 105

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                110                 115                 120

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
                125                 130                 135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                140                 145                 150

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                155                 160                 165

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                170                 175                 180

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
                185                 190                 195

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
                200                 205                 210

Ser Leu Ser Leu Ser Pro Gly Lys
                215
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<210> 4
<211> 218
<212> PRT
<213> homo sapiens

<400> 4

4

Pro Ala Pro Glu Leu Leu Gly Gly Ile Ser Val Phe Leu Phe Pro
 1   5   10   15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
                20   25   30

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
                35   40   45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                50   55   60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
                65   70   75

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
                80   85   90

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
                95   100   105

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                110   115   120

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
                125   130   135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                140   145   150

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                155   160   165

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                170   175   180

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
                185   190   195

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
                200   205   210

Ser Leu Ser Leu Ser Pro Gly Lys
                215

<210> 5
<211> 217
<212> PRT
<213> homo sapiens

<400> 5
Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
 1   5   10   15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
                20   25   30

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe
                35   40   45

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
                50   55   60

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val
                65   70   75

Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
                80   85   90

Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr
                95   100   105

Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
                110   115   120

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
                125   130   135

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
                140   145   150

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
                155   160   165

Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
                170   175   180

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
                185   190   195

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
                200   205   210

Leu Ser Leu Ser Pro Gly Lys
                215

<210> 6
<211> 218
<212> PRT
<213> homo sapiens

<400> 6
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
    1   5   10   15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
                20   25   30

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
                35   40   45

Phe Lys Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
                50   55   60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
             65   70   75

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
             80   85   90

Lys Cys Lys Val Ser Asn Tyr Ala Leu Pro Ala Pro Ile Gln Lys
             95   100   105

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
            110   115   120

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
            125   130   135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
            140   145   150

Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr Asn Thr Thr
            155   160   165

Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
            170   175   180

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe Ser
            185   190   195

Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys
            200   205   210

Ser Leu Ser Leu Ser Pro Gly Lys
            215

(210) 7
(211) 218
(212) PRT
(213) Homo sapiens

(400) 7
Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
   1   5   10   15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
            20   25   30

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
            35   40   45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
            50   55   60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser
            65   70   75

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
            80   85   90

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
                95   100   105

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
                110   115   120

Thr Leu Pro Pr Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser
                125   130   135

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
                140   145   150

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                155   160   165

Pro Pro Val Leu Asp Ser Asp Gly Ser Ile Phe Leu Tyr Ser Arg
                170   175   180

Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
                185   190   195

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
                200   205   210

Ser Leu Ser Leu Ser Leu Gly Lys
                215

<210> 8
<211> 215
<212> PRT
<213> Mus musculus

<400> 8
Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro
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Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val
                20   25   30

Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp
                35   40   45

Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg
                50   55   60

Glu Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro
                65   70   75

Ile Met His Gln Asp Cys Leu Asn Gly Lys Glu Phe Lys Cys Arg
                80   75   90

Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser
                95   100   105

Lys Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro
                110   115   120

9

Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr
                155   160   165

Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys
                170   175   180

Leu Arg Val Glu Lys Lys Asn Trp Val Gln Arg Asn Ser Tyr Ser
                185   190   195

Cys Ser Val Val His Glu Gly Leu His Asn His His Thr Thr Lys
                200   205   210

Ser Phe Ser Arg Tyr Pro Gly Lys
                215

<210> 10
<211> 218
<212> PRT
<213> Mus musculus

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Pro Ala Pro Asn Leu Glu Gly Gly Pro Ser Val Phe Ile Phe Pro
  1   5   10   15

Pro Asn Ile Lys Asp Val Leu Met Ile Ser Leu Thr Pro Lys Val
                20   25   30

Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln
                35   40   45

Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr
                50   55   60

Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Ile Arg Val Val Ser
                65   70   75

His Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
                80   85   90

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ser Pro Ile Glu Arg
                95   100   105

Thr Ile Ser Lys Pro Lys Gly Leu Val Arg Ala Pro Gln Val Tyr
                110   115   120

Thr Leu Pro Pro Pro Ala Glu Gln Leu Ser Arg Lys Asp Val Ser
                125   130   135

Leu Thr Cys Leu Val Val Gly Phe Asn Pro Gly Asp Ile Ser Val
                140   145   150

Glu Trp Thr Ser Asn Gly His Thr Glu Glu Asn Tyr Lys Asp Thr
                155   160   165

Ala Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Ile Tyr Ser Lys
                170   175   180

10

Leu Asn Met Lys Thr Ser Lys Trp Glu Lys Thr Asp Ser Phe Ser
                185   190   195

Cys Asn Val Arg His Glu Gly Leu Lys Asn Tyr Tyr Leu Lys Lys
                200   205   210

Thr Ile Ser Arg Ser Pro Gly Lys
                215

<210> 11
<211> 218
<212> PRT
<213> Mus musculus

<400> 11
Pro Pro Gly Asn Ile Leu Gly Gly Pro Ser Val Phe Ile Phe Pro
    1   5   10   15

Pro Lys Pro Lys Arg Ala Leu Met Ile Ser Leu Thr Pro Lys Val
                20   25   30

Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val His
                35   40   45

Val Ser Trp Phe Val Asp Asn Lys Glu Val His Thr Ala Trp Thr
                50   55   60

Gln Pro Arg Glu Ala Gln Tyr Asn Ser Thr Phe Arg Val Val Ser
                65   70   75

Ala Leu Pro Ile Gln His Gln Asp Trp Met Arg Gly Lys Glu Phe
                80   85   90

Lys Cys Lys Val Asn Asn Lys Ala Leu Pro Ala Pro Ile Glu Arg
                95   100   105

Thr Ile Ser Lys Pro Lys Gly Arg Ala Gln Thr Pro Gln Val Tyr
                110   115   120

Thr Ile Pro Pro Pro Arg Glu Gln Met Ser Lys Lys Lys Val Ser
                125   130   135

Leu Thr Cys Leu Val Thr Asn Phe Phe Ser Glu Ala Ile Ser Val
                140   145   150

Glu Trp Glu Arg Asn Gly Glu Leu Glu Gln Asp Tyr Lys Asn Thr
                155   160   165

Pro Pro Ile Leu Asp Ser Asp Gly Thr Tyr Phe Leu Tyr Ser Lys
                170   175   180

Leu Thr Val Asp Thr Asp Ser Trp Leu Gln Gly Glu Ile Phe Thr
                185   190   195

Cys Ser Val Val His Glu Ala Leu His Asn His His Thr Gln Lys
                200   205   210

11

Asn Leu Ser Arg Ser Pro Gly Lys
215

12